





# ANDREW SEOHWAN YU

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## EDUCATION

### Case Western Reserve University

- PhD in Computer Science

Cleveland, OH

2021-Present

### Cleveland State University

- Master of Computer and Information Sciences
- Thesis: NBA Basketball Analytics with ML
- *Magna Cum Laude*, GPA 3.61/4.00

Cleveland, OH

2014-2017

### Kent State University

- Bachelor of Science, Integrated Life Sciences
- *Magna Cum Laude*, GPA 3.74/4.00

Kent, OH

2009-2011

## RESEARCH

### Cleveland Clinic, Lerner Research Institute

- Advisor: Xiaojuan Li
- Unsupervised segmentation of musculoskeletal lesions in MRIs using anomaly detection
- Quantitative medical imaging and radiomics to find biomarkers for osteoarthritis

Cleveland, OH

2021-Present

### Case Western Reserve University

- Advisor: Vipin Chaudhary
- Comparison and evaluation of generative models (diffusion models, GANs, VAEs)
- Fine-tuning foundational generative models for small-domain tasks

Cleveland, OH

2021-Present

### Cleveland State University

- Advisor: Sunnie Chung
- NBA basketball play prediction using real-time player and ball position data and machine learning

Cleveland, OH

2016-17

## PUBLICATIONS

**Inpainting MRI for unsupervised knee bone marrow edema-like lesion segmentation using conditional diffusion models**, Andrew Seohwan Yu, Richard Lartey, William Holden, Ahmet Hakan Ok, Jeehun Kim, Carl Winalski, Naveen Subhas, Vipin Chaudhary, and Xiaojuan Li, presented at the Society of Photo-Optical Instrumentation Engineers (SPIE) Imaging Informatics for Healthcare, Research, and Applications, San Diego, February 20, 2024

**Novel Unsupervised Segmentation of Bone Marrow Edema-Like Lesions using Bayesian Conditional Generative Adversarial Networks**, Andrew Seohwan Yu, Sibaji Gaj, William Holden, Richard Lartey, Jeehun Kim, Carl Winalski, Naveen Subhas, and Xiaojuan Li, Proceedings of the International Society for Magnetic Resonance in Medicine, (ISMRM) Scientific Meeting and Exhibition, ISSN 1545-4428 (Online), May 19, 2023

**Empirical Study: Temporal and Spatial Feature Processing Methods for Prediction of NBA Basketball Plays for Sports Analytics**, Sun Sunnie Chung and Andrew Yu. Accepted to International Journal of Networked and Distributed Computing (IJNDC), Vol 7: Issue 3, ISSN Print: 2211-7938, ISSN Online: 2211-7946, July 2019

**Automatic Identification and Analysis of Basketball Plays: NBA On-Ball Screens**, Andrew Yu and Sun Sunnie Chung, in the Proceedings of the 4th IEEE International Conference on Big Data, Cloud Computing and Data Science Engineering, Honolulu, May 2019

# TEACHING

## Pennsylvania State University

- Full-time instuctor
  - Artificial Intelligence (Python)
  - Technical Game Development (Unreal Engine 4)
  - Game Development Project (Unreal Engine 4)
  - Applications Programming (Android, Kotlin)
  - Operating Systems and Programming (C, UNIX)
  - Introduction to Programming Techniques (C++)

Erie, PA

2017-2021

Spring 2021

Spring 2021

Fall 2020

Spring 2020

Fall 2017-Spring 2019

Fall 2017-Summer 2021

## Cleveland State University

- Graduate Teaching Assistant
  - Introduction to Engineering Design (C, Arduino)
  - Introduction to Programming (Java)

Cleveland, OH

2016-17

Spring 2017

Fall 2016